

Abstract

A method of determining a placement of services of a distributed application onto nodes of a distributed resource infrastructure. In an embodiment of the present invention, a placement indicator for a specific service is provided. Communication constraints between node pairs are also provided. The communication constraints ensure that a sum of transport demands between a particular node pair does not exceed a transport capacity between the particular node pair. . Constraints can be expressed for preventing unwanted placements. Preferences can be expressed for preferring specified placements. Each term of the sum comprises a product of a first placement variable, a second placement variable, and the transport demand between the services associated with the first and second placement variables. The placement indicator, the communication constraints, and an objective comprise an integer program. A local search solution is applied to solve the integer program, which determines the placement of the services onto the nodes.